AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method of forming a single crystalline aluminum nitride film, comprising nitriding a single crystalline α-Al_2O_3 substrate to form a single crystalline aluminum oxynitride layer and an aluminum nitride film as an outermost layer directly on the single crystalline aluminum oxynitride layer.

2. (Original) The method of claim 1, wherein the single crystalline α-Al_2O_3 substrate is nitrided by heating in the presence of carbon, nitrogen and carbon monoxide.

3. (Canceled)

4. (New) The method of claim 2, wherein a weight ratio of carbon to single crystalline α-Al_2O_3 is 0.1 to 1.

5. (New) The method of claim 2, wherein a mixing ratio of carbon monoxide to nitrogen is 0.1 to 0.5.

6. (New) The method of claim 2, wherein a heating temperature is from 1,903 ^{o}K to 2,149 ^{o}K, whereby the aluminum oxynitride and aluminum nitride are directly balanced.

7. (New) The method of claim 2, wherein a partial pressure ratio of PCO to PN_2 is 0.1 at 1,973 ^{o}K to yield a growth speed of 0.2 to 0.8 μm/hour.

8. (New) The method of claim 1, wherein a dislocation density of the single crystalline aluminum nitride film is $108/cm^2$ or less.

9. (New) The method of claim 1, wherein the aluminum oxynitride layer has a thickness of about 0.1 μm.

10. (New) A method of forming a single crystalline aluminum nitride film, comprising:

nitriding a single crystalline α-Al_2O_3 substrate to form a single crystalline aluminum oxynitride layer and an aluminum nitride film directly on the single crystalline aluminum oxynitride layer, wherein the single crystalline α-Al_2O_3 substrate is nitrided by heating in the presence of carbon, nitrogen and carbon monoxide, and a mixing ratio of carbon monoxide to nitrogen is 0.1 to 0.5.